

Application Serial No. 10/576,579
Reply to office action of November 15, 2007

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PATENT
Docket: CU-4794

Amendments To The Claims

The listing of claims presented below will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (previously presented) A metal-insulator transition switching transistor, comprising:
 - a silicon substrate;
 - a gate electrode formed directly on the substrate;
 - a gate insulation film on the gate electrode and the silicon substrate;
 - an abrupt metal-insulator-transition channel layer on the gate insulation film,wherein the abrupt metal-insulator-transition channel layer changes from an insulator phase to a metal phase abruptly, or vice versa, depending on a variation of an electric field; and
 - a source and a drain being contacted with both sides of the abrupt metal-insulator-transition channel layer, respectively.
2. (previously presented) The metal-insulator-transition switching transistor as claimed in claim 1, wherein the substrate is made of silicon.
3. (original) The metal-insulator-transition switching transistor as claimed in claim 1, wherein the source and the drain is a double layer constituted by materials selected from the group consisting of either a chrome (Cr) layer and a gold (Au) layer or a tungsten (W) layer and a titanium (Ti) layer.

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4. (previously presented) The metal-insulator-transition switching transistor as claimed in claim 1, wherein the abrupt metal-insulator-transition channel layer is composed of a vanadium dioxide (VO_2) thin film.

5-9. (canceled)